

Advantech AE Technical Share Document

Date	2016 / 12 / 8 SR# 1-2755147681		1-2755147681	
Category	FAQ SOP Related OS Microsoft Windows7		Microsoft Windows7	
Abstract	How to configure WebAccess WASCADA			
Keyword	WebAccess, WASCADA, SCADA			
Related Product	WebAccess all versions (after multi Modbus Servers available)			

Description:

WASCADA architecture is used for doing data integration with multiple SCADA Nodes. User can read data from other SCADA Nodes through WASCDA Driver, consider the SCADA Node as a general device. Through WASCADA, users can do the central management, monitoring multiple SCADA Nodes that be distributed in all over the world at the same time, and also provides bolt continuingly function. Basic architecture is shown in Picture1.



This FAQ is also applied if only router has DHCP, as shown in Picture 2



If user doesn't use VPN network architecture area, it requires for the upper SCADA Node has public fixed IP.

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Solution:

 User can prepare at least two computers (A and B) that have installed WebAccess and have project to use. First of all, make sure the two computers are in the same domain, can 'ping' each other, and confirm the port 80, 4592 and 14592 are opened.

Structure:

Computer A (WASCADA; 172.18.3.30) --- TCP/IP --- Computer B (Lower SCADA Node; 172.18.3.36)

2. Login to Project Manager in **Computer A**, add a Project Node named 'WASCADA' and a SCADA Node named 'Node', as shown in Picture 3.





3. Select Project Node from the Project Tree at left hand site, and select 'Upload Remote Node', as shown in Picture 4.

Advantech WebAccess Project Manager						
Project/Node WASCADA Mode Device Driver	^	Project Property Add SCADA Node Import SCADA Node Upload Remote Node User Project : WASCADA				
		Project Name	WASCADA			
		Project Description	Project Description			
A101 ABMLGX		Project Node IP Address	localhost			

Picture 4

4. Enter the page of Upload Remote Node, enter the IP of **Computer B**, take 172.18.3.36 for example, as shown in Picture 5.

	Upload Remote Node [Cancel] Submit
Project Node IP Address	172.18.3.36
Project Primary TCP Port	0
Project Timeout	0
Remote Access Code	
Modbus Listening Port	0
	Upload Options
	All Tags Only Alarm Tags
	Priority V > V
	☑ Include Alarm Group Target Node Start Group No.: 1
	☑ Upload Real Trend Group Target Node Start Group No.: 1
	☑ Upload Data Log Trend Group Target Node Start Group No.: 1
	O Independent alarm
	O Independent Point Property
	Sync Datalog Trend
	[Cancel] Submit

Picture 5

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- Enter IP address or URL of remote Project Node.
- Enter Project Primary TCP Port of remote project.
- Enter Remote Access Code of remote project. Note - A Remote Access Code prevents unauthorized users copy user's SCADA node
- The Upload Options are for synchronization of data and Alarm log, user can check them according to user's project requirement.
- Sync Datalog Trend is the bolts continuingly function. If user checks it, when the communication between the upper node and lower node is fail, the lower node will save historical data in local. After the communication back, the upper node data will be auto-completion.
- 5. An ASP Page appears listing SCADA Nodes in the remote project, as shown in Picture 6.

Upload Remote Node(All Tags) [Cancel] Submit						
Source Project	Node IP Address	Target Project Node IP Address				
172.1	8.3.36	localhost				
Source Project Name	Source Node Name	Target Project Node Name	Target Node Name	TagName PreFix		
APAXtest	ONode					
CalculationDEMO	ONode					
Express	OSCADA					
LiviaProject	○EventTestP					
LiviaProject	Node					
LiviaProject	ONode1					
LiviaProject	O Node3					
LiviaProject	OPNode					
LiviaProject	ORedundantNode					
LiviaProject	○VideoTestPC					
LiviaRedunPro	O SCADANode1					
ODBC	ONode					
ODBC	ONode1					
OPCTest	ONode					
SUSItest	⊖node					
WASCADA	ONode	WASCADA	Node V			
		[Cancel] Submit				

Picture 6

The left side is the project list in computer B, the right side is the project list in computer A, user can choose which project user wants to upload, and which project node user wants to receive the remote project, and user can add tag name prefix, but the length of tag name must be less than 21 characters, so don't enter too long prefix, otherwise the upload will fail.

6. After upload successfully, WebAccess will show the result as in Picture 7

Source P Target Pr Import P Add new Importing	roject Name: [LivaProject] Sour oject Node Name [WASCADA] on Settings/TCPP Port : 1 DeviceNodeUnit 0 Block Settings Plock Settings Plock Tags Block Tags Plocerte Cale Tags Q constant and System Tags Q foicerte Tags T ext Tags Analog Tags T ext Tags Analog Tags T ext Tags Plocerete Cale Tags Q foicerte Alarm Tags Q sources Alarm Tags Q sources I fags D sources Cale Tags D sources Cale Tags D sources Cale Tags D sources Cale Tags Q for the Corego	– Upload Remote Node Starts – Node Name (Node] Target Node Name: [Node]		-			
		Opioad Remote Node Complete					
	Upload Remote Node Successfully						
	Source Project	Node IP Address	Tarş	get Project Node IP Address			
	172.1	18.3.36		localhost			
	Source Project Name	Source Node Name	Target Project Node Name	Target Node Name	Status		
	LiviaProject	Node	WASCADA	Node	✓		
			OK				

Picture 7



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7. Click 'OK' in Picture 7, and it will be back to SCADA Node. User will see the new device in the project tree at left hand site, as shown in Picture 8.

	Advantech WebA	ccess Project Manager
Project/Node WASCADA	Node Property Delete Add Comport AccPoint CalcPoint ConstP. Report Scheduler ClassroomScheduler AlarmManagementSyste Start View Start Draw Download Graph Only Start Node Stop Node Node : WASCADA • Node	oint SysPoint FacePlate RealTimeTrend DataLo m EventLog KeyMapping ImportExternalData I
Port1 (tenin)	Node Type	Professional Version
<u>Node</u> ≔	Node Name	Node
Device Driver	Node Description	
A101	SCADA Node IP Address	localhost



 The device name is the remote SCADA Node name, under the device, user can see all tags that be uploaded. The address of every tag is the tag name of the lower SCADA Node, '/T' means it has bolt continuingly function, as shown in Picture 9.

		Advantech WebAcce	ess Project Manager
Droject/Nede		Tag Property Delete	
Project/Node		Tag: WASCADA • Node • 1 • Node • Accrue01	
Node	^	Тад Туре	Point (analog)
⊡ <u>Port1 (tcpip)</u> ⊡ <u>Node</u> ≔		Tag Name	Accrue01
<u>A</u>		Description	描述
Accrue01		Scan Type	Constant Scan
Accrue02 AccTag		Address	Accrue01/T
AlarmTag		Conversion Code	AUTO

Picture 9

9. After uploading the remote node, user has to configure both SCADA Node and communication mode. In the computer A, click SCADA Node property and modify "Modbus Listening Port" to 504, as shown in Picture 10



10. Click the Device 'Node', change the IP Address and port to 0, as shown in Picture 11.

	Advantech WebAccess Project Manager						
	Delete Add Tag Add Block						
Project/Node							
WASCADA			De	evice Property	[Cancel]	Submit	
Node	Davies News	Nede					
Port1 (tcpip)	Device Name	Node					
⊡ <u>Node</u> ≔	Description						
<u>A</u> A01	Unit Number	0					
Accrue01	Device Type	WASCADA ¥					
Accrue02	50000 1990	THREE TRACE				1	
AccTag			IP Address	0			
AlarmTag	Primary		Port Number	0			
AlarmTrigger			Device Address	0 if	other than Ur	nit Number	
ALMStop			ID Address				
<u>A0001</u>			II Address				
AO40001	Secondary		Port Number				
<u>AO40002</u>			Device Address				
<u>AO40003</u>							
<u>AO40004</u>							
AO40005	Sync. Remote alarm, no log:1, with log:2 :	2		Sync. Runtime	Tag Field :	1	
A040005	Max. Tags per packet (CE:300):	500		Comp	ress Data:	0	
A040007	, p., p., (,						
A040009				[Cancel]	Submit		

Picture 11



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11. In the Computer B, enter the SCADA Node properties; configure the four items, as shown in Picture 12.

Send Where I Am To IP Address 172.1	8.3.30	× (IP1;IP2)
Send Where I Am To Port 504	(Port1;Port2)	
Send Where I Am Every 10	(Frequence1;Frequence2) Seconds	

Picture 12

- Send Where I Am To IP Address Enter the fixed IP address of the upper SCADA Node. E.g. 172.18.3.30
- Send Where I Am To Port 504
- Send Where I Am Every the interval of update data, E.g. 10
- 12. Start the kernel of the both WASCADA (Computer A) and Lower SCADA Node (Computer B) at the same time, and user can see the data in the upper SCADA Node -> View/ViewDAQ -> Point Info
- If user runs DSPOOL.exe (c:\WebAccess\node) in WASCADA, he will be able to find SCADA Node IP Address / Router IP Address in it. This means the connection of port 504 between WASCADA (Computer A) and Lower SCADA Node (Computer B) is successful. As show in Picture 13.



Note:

- Except automatically upload, user can also add SCADA Node manually, just make the SCADA Node as a device, named it the lower SCADA Node name, choose Device type 'WASCADA', add tags named by the tag name of the lower SCADA Node.
- 2. When user has to upload multiple SCADA Nodes to the same Super SCADA, please give all Lower SCADA Nodes different SCADA Node names.
- 3. WebAccess Super SCADA uses Modbus TCP as protocol. Super SCADA acts as Modbus Server and Lower SCADA Node acts as Modbus client. For testing, user may use Modscan to connect Super SCADA port 504 and check whether data is readable or not.
- Port "504" in not the only possible port and user may freely to modify it.
 Please note "Modbus Listening Port" in Upper SCADA Node and "Send Where I Am To Port" in Lower SCADA Node must be matched.
 - Upper SCADA Node -> SCADA Node property -> Modbus Listening Port:

Modbus Listening Port 504

• Lower SCADA Node -> SCADA Node Property -> Send Where I am To Port:

Send Where I Am To Port 504 (Port1;Port2)